BEFORE THE BOARD OF SUFERVISORS OF THE COULTY OF SAN JOAQUIN? STATE OF CALIFORNIA.

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IN THE MATTER OF LINDEN PROTECTION DISTRICT OF SAN JOAQUIN COUNTY.

To the Honorable Doard of Supervisors of the County of San Joaquin,

State of California.

Gentlemen:

Having been appointed and employed by you to make certain surveys, maps, plans and specifications relating to proposed improvements for the protection of Linden Protection District this coming season, I beg to report that I have made said surveys, maps, plans and specifications and especially recommend as follows: -

1st. The raising and rebuilding of entire levee from west end of Highway work on Robertson Flace to the Flood Bridge to conform to grade and plan as shown on accompanying profile and map, 27,595 cubic yards , 7 20% \$5,519.00

2nd. Blasting hardpan as indicated on map between stations 25 and 50 .

750.00

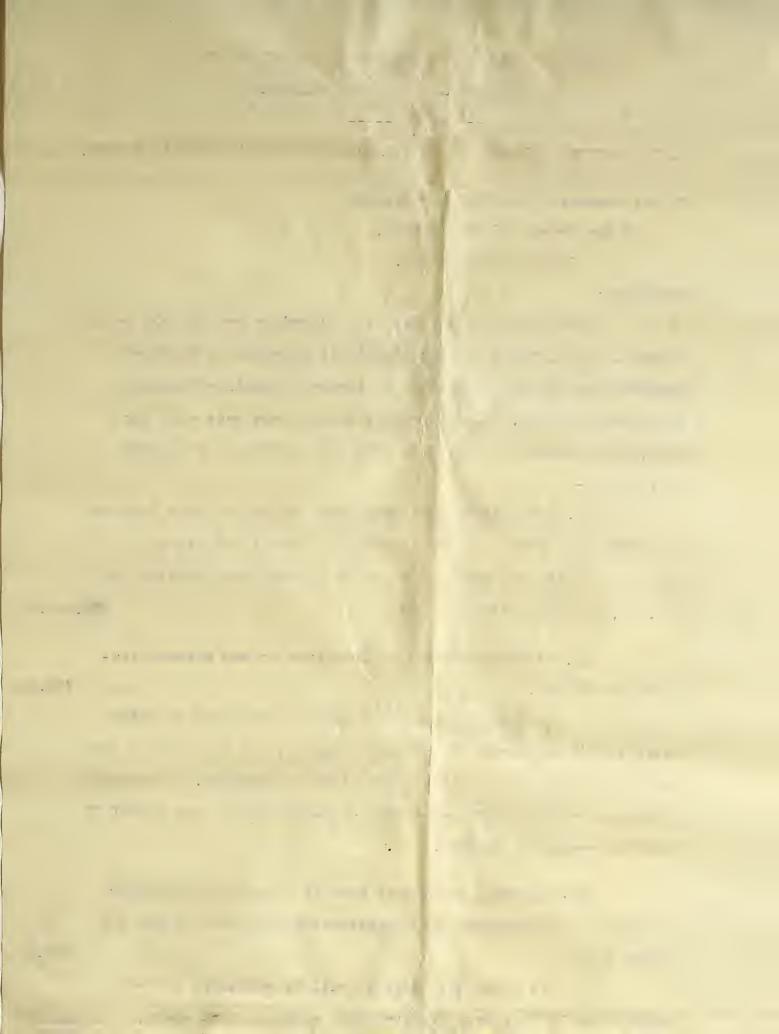
In doing this work it will be necessary to drive holes to 2/3 the depth of hardpan thickness, not more than 6 feet apart and placed from \frac{1}{2} to 1 stick of Giant-Gelatine. A strip of 18 feet in width should be removed or shaken loose from center or near the center of Channel.

3rd. Removing jetties of bank by blasting from points as shown on accompanying map approximating 2000 feet at 25/ per lineal foot

500. ®

In doing this work it will be necessary to bore hales about 12 feet back from bank and about 20 feet apart,

-6769,00



using sufficient powder to crack the dirt to the surface of bank.

4th. 1000 lineal feet of brush mattress at 50% per lineal foot

\$500.00

This brush mattress should be well wired and weighted with concrete lugs surk in the hardpan and each separate stretch of mattress anchored to an extra heavy weight at up stream end. Rach new piece of work or where fresh embankment is exposed to turn of current, should be protected by this mattress.

5th. 1320 feet of Levee on line between O.H. Hunt and Weithorly Tlace on Colaveras River 3300 vards at 10d a yard 330.00

This Levee will be raised to an elevation of 2 feet above bank of River and should have an 3 foct crown, with slopes of//2 to 1 and 2 to 1.

6th. 600 feet of brush mattress work on Calaveras River at Miller Place

600.00

This mattress work will be laid and anchored as above advised.

7th. Superindendance and engineering at 5% of the above 408.00

Would also call your attention to the fact that the greater portion of this Levee is infested with squirrels and gophers, would especially recommend that this matter be looked after very carefully and that \$100 be set aside for their extermination

100.00

momAT.

48707.00

Very respectfully submitted.

1 Broadhush

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LINDER PROTECTION DISTRICT

ENGINEERS REPORT FOR YEAR 1911.

By GTO. W. DROADHURST, C.E.

## Received Filed

EUGENE D. GRAHAM, Clork